

## REMARKS

Claim 1 stands rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant respectfully traverses this rejection.

In the Final Office Action, the Examiner maintained his assertion that the feature defined in lines 8-11 of Claim 1 (“wherein said ring-like element increases the natural frequency of the wheel such that the natural frequency of the wheel is in a frequency band higher than a frequency band of a pneumatic tire mounted thereon”) is not present in the Specification, and is therefore considered as new matter.

In response, Applicant once again respectfully directs the Examiner’s attention to paragraphs [0003], [0006], [0007], [0021] and [0022] of the Specification, as originally filed. More specifically, paragraph [0003] of the “Technical Background” section of the Specification discusses the problem of increased resonant action when the natural frequency of the wheel is close to the natural frequency of the pneumatic tire. For example, paragraph [0003] discloses that wheels which are lightened by reducing the thickness of the disk or rim have a lower spring constant, which lowered spring constant makes the natural frequency of the wheel move into a lower frequency band, which band is close to the natural frequency of the tire, resulting in resonant action between the two frequencies that is evidenced by road noise problems.

Then, paragraphs [0006] and [0007] of the “Disclosure of the Invention” section of the Specification discuss how the addition of a thick element (i.e., such as the claimed “solid ring-like element”) either maintains or increases the natural frequency of a

wheel that has been lightened by reducing the thickness of its disk or rim (“by provision of a thick element on the bead seat portion which greatly affects the natural frequency of a wheel . . . The natural frequency of the lightened wheel [with the thick element added] . . . can therefore be kept in or above a frequency band prior to lightening.”).

Finally, paragraphs [0021] and [0022] of the “Best Modes For Carrying Out the Invention” section of the Specification discuss how the ring-like element (“thick element”) prevents deformation of the bead seat portion of the wheel, thereby maintaining the natural frequency of the wheel in the natural frequency band that it would have been in prior to lightening of the wheel, which frequency band is “away from the natural frequency of the pneumatic tire,” and thus “[t]he natural frequency of the lightened wheel and the natural frequency of a pneumatic tire attached thereto are, therefore, not close to each other, thus avoiding an increase in a resonant action between the natural frequencies of the wheel and pneumatic tire.”

In the Examiner’s response to Applicant’s Response E, which included an abbreviated version of the arguments made above, the Examiner asserted that paragraphs [0003], [0006]-[0007] and [0021]-[0022] of the Specification “do not set forth the specific language of the claim limitations of lines 8-11 of claim 1.” *See* Final Office Action, page 7, lines 3-5. In response, Applicant respectfully reminds the Examiner that “the exact terms [of the claims] need not be used *in haec verba* to satisfy the written description requirement of the first paragraph of 35 U.S.C. §112.” *See e.g.*, MPEP §1302.01. Moreover, as shown above, the cited portions of the Specification discuss one of benefits (reducing road noise problems caused by the frequency of the wheel being too close to the frequency of the tire) of

specific embodiments of the claimed invention (a wheel including a ring-like element added thereto, where the ring-like element increases the natural frequency of the wheel so that it is higher than that of a tire mounted thereon), and are not merely “generic theories” that do not relate to the claimed invention.

Thus, for at least the reasons set forth above, Applicant respectfully submits that it has been shown that the feature at issue is sufficiently disclosed in the specification as originally filed, and is therefore not new matter. Thus, Applicant respectfully requests the withdrawal of this §112, first paragraph, rejection of independent Claim 1.

Claims 1 and 8-13 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 3,799,618 to Martinoli in view of United States Patent No. 5,250,220 to Atwell and further in view of United States Patent No. 5,564,792 to Archibald. Applicant respectfully traverses this rejection.

Applicant once again respectfully submits that the cited references fail to disclose or suggest all of the features of independent Claims 1 and 12. More specifically, with regard to independent Claim 1, Applicant respectfully submits that the cited references fail to disclose or suggest a wheel that includes, *inter alia*, a solid ring-like element that “increases the natural frequency of the wheel such that the natural frequency of the wheel is in a frequency band higher than a frequency band of a pneumatic tire mounted thereon.” In the Final Office Action, the Examiner did not specifically reject this feature under a prior art rejection, but merely asserted that it was new matter and that the proposed combination is considered to meet such a feature (see Final Office Action, page 4, lines 17-21; page 7, lines 7-11).

In response, Applicant respectfully reminds the Examiner that even limitations that the Examiner may consider as being new matter need to be considered in light of prior art for a §103 rejection. *See e.g.*, MPEP §2163.06(I) (“The examiner should still consider the subject matter [that is allegedly new matter] in making rejections based on prior art since the new matter rejection may be overcome by applicant.”); MPEP §2143.03(II) (“When evaluating claims for obviousness under 35 U.S.C. 103, all the limitations of the claims must be considered and given weight, including limitations which do not find support in the specification as originally filed (i.e., new matter.”). Thus, failing to consider the feature at issue is improper.

The Examiner also asserted that “the KSR decision (*KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007)) precludes the need for references to specifically point out all features of the claims.” *See* Final Office Action, page 7, lines 11-13. Applicant respectfully submits that the Examiner has misinterpreted the holding of the KSR case. The section of the KSR case that the Examiner refers to (page 415) rejects the “rigid approach” of requiring a teaching, suggestion, or motivation (the TSM test) for making modifications to a reference in favor of a more flexible approach. However, it does not stand for the proposition that all claimed features do not need to be disclosed in the prior art. Instead, the KSR case holds that for a combination to be obvious, it is important to identify a reason for combining the elements to arrive at the claimed subject matter (127 S.Ct. 1727, 1741, 82 U.S.P.Q.2d 1385, 1396 (2007)). Cases decided after the KSR case show that an obviousness rejection still requires that the prior art disclose or suggest every element of the claimed invention. *See e.g.*, Ex parte Asrar et al., Appeal No. 2009-004036, decided December 1,

2009 (“[O]bviousness requires a suggestion of all limitations in a claim.” (emphasis added); Petter Investments, Inc. v Hydo Engineering, Inc., 2009 WL 2922303 (W.D. Mich. 2009) (“the prior art must teach or suggest every element of the claimed invention.” (emphasis added))).

In the instant case, the Examiner has not shown that the prior art discloses or suggests a solid ring-like element that “increases the natural frequency of the wheel such that the natural frequency of the wheel is in a frequency band higher than a frequency band of a pneumatic tire mounted thereon,” as defined in independent Claim 1. Thus, the Examiner has not made the required *prima facie* case of obviousness. Accordingly, the burden has not shifted to Applicant to show evidence of non-obviousness. Thus, for at least these reasons, Applicant respectfully requests the withdrawal of this §103 rejection of independent Claim 1 and associated dependent Claims 8-11 and 13.

Additionally, Applicant also respectfully submits that the cited references, alone or in combination, fail to disclose or suggest that the claimed ring-like element is located on the inboard side of the wheel between the hump of the inboard cylindrical bead seat and the inboard annular rim flange, as defined in independent Claim 1. As correctly acknowledged by the Examiner, the proposed combination of Martinoli and Atwell does not show only a single ring-like element located on the rim. *See* Final Office Action, page 4, lines 3-4. Accordingly, the Examiner relied upon the Archibald reference for a teaching related to having only a single ring-like element. *See* Final Office Action, page 4, lines 4-16 and page 7, lines 3-4.

However, even assuming *arguendo* that the Archibald reference could be combined with Martinoli and Atwell, the resulting combination would not be a single ring-like element that is located at the position defined in Claim 1, *i.e.*, on the inboard side of the wheel between the hump of the inboard cylindrical bead seat and the inboard annular rim flange, as defined in independent Claim 1. Instead, one of ordinary skill in the art would have placed such a single ring-like element at the center of mass of the wheel, and not at the inboard side, as taught in numerous places in the Archibald reference (while referring to the “balancing flange 64,” which the Examiner equated with the claimed “ring-like element”). *See e.g.*, Archibald, col. 4 (lines 43-55); col. 5 (lines 11-26), and col. 5 (line 66) through col. 6 (line 3).

In support of the Examiner’s assertion that the Martinoli reference teaches the use of a single ring-like element, the Examiner cited column 2, lines 61-65 of the Martinoli reference for the proposition that this reference discloses that only one ring-like element could be provided. In response, Applicant respectfully submits that this section of the Martinoli reference merely discloses that weights may be applied to either the inboard or outboard portion of the rim, or both, but this section of Martinoli does not disclose the use of only an outboard rib 22 or only an inboard rib 22a. In other words, the section of the Martinoli reference at issue discloses the use of weights on only one rib (outboard or inboard), but not that one of the ribs could be eliminated.

Accordingly, as it has been shown that the proposed combination of Martinoli, Atwell and Archibald would have lacked the claimed single ring-like element that is located on the inboard side of the wheel between the hump of the inboard cylindrical bead seat and

the inboard annular rim flange, as defined in independent Claim 1, Applicant respectfully requests the withdrawal of this §103 rejection of independent Claim 1 and associated dependent Claims 8-11 and 13 for at least this reason.

With regard to independent Claim 12, Applicant once again respectfully submits that the cited references, alone or in combination, do not disclose or suggest a wheel that includes, *inter alia*, an “inboard annular rim flange [that] includes a radially-extending inboard facing surface that is continuously and completely co-planar with a radially-extending inboard facing surface that extends along the entire radial length of the ring-like element,” as defined in independent Claim 12.

Applicant’s Figure 1 shows one example of an embodiment with a radially-extending inboard annular rim flange [22B] including a radially-extending inboard facing surface [22B1] that is continuously and completely co-planar with a radially-extending inboard facing surface [26a] that extends along the entire radial length of the ring-like element [26].

As correctly acknowledged by the Examiner on page 3, lines 17-18, of the Final Office Action, the Martinoli reference does not disclose a ring-like element located at the inboard bead seat of the rim. Accordingly, the Examiner relied upon the Atwell reference for this feature.

However, Applicant respectfully submits that the Atwell reference also fails to disclose or suggest this feature. More specifically, as can be seen in Figure 4 of the Atwell reference, assuming *arguendo* that the radially inner portion of circular flange 20 is considered as the claimed “ring-like element,” it can be seen that the radially-extending right-

hand surface of this element is not continuously and completely co-planar with the right-hand surface of the portion of the flange that is radially outside of flange 20. Accordingly, the Atwell reference does not satisfy the portion of Claim 12 that defines “a radially-extending inboard-facing surface [of the inboard annular rim flange] that is continuously and completely co-planar with a radially-extending inboard facing surface that extends along the entire radial length of said ring like element” (emphasis added), as defined in independent Claim 12.

In the alternative, assuming *arguendo* that circular flange 18 is considered as the claimed “ring-like element,” it can also be seen that flange 18 also lacks a radially-extending right-hand surface that is continuously and completely co-planar with a radially-extending right-hand surface of an element that can be considered as equivalent to the claimed annular rim flange. Further, neither the Martinoli reference nor the Archibald reference remedies this deficiency.

On page 6, lines 6-15, of the Final Office Action, the Examiner asserted that in the Atwell reference, “the inboard surfaces of the rim flange and the ring-like element both fall completely and continuously within the plane that encompasses the rim flange in its entirety” (emphasis added). However, Applicant would like to point out that this does not satisfy the language of Claim 12, which does not mention a plane that encompasses the rim flange, but instead defines: “an “inboard annular rim flange [that] includes a radially-extending inboard facing surface that is continuously and completely co-planar with a radially-extending inboard facing surface that extends along the entire radial length of the ring-like element” (emphasis added). In other words, Claim 12 recites that the inboard facing



surface is continuously and completely co-planer with a surface that extends along the entire radial length of the ring-like element, and not just that the ring like element is within the plane that encompasses the rim flange. Thus, Applicant respectfully submits that this portion of the Final Office Action does not show that the proposed combination satisfies the language of Claim 12.

Additionally, the Examiner also asserted in this portion of page 6 of the Final Office Action that it would have been obvious to have formed the rim flange and ring-like element with vertically extending faces “as a substitute and equivalent configuration.” In response, Applicants respectfully remind the Examiner that such a broad conclusory statement does not satisfy KSR, which holds that for a combination to be obvious, it is important to identify a reason for combining the elements to arrive at the claimed subject matter (127 S.Ct. 1727, 1741, 82 U.S.P.Q.2d 1385, 1396 (2007)). Thus, as the Examiner has failed to provide the necessary reason for making the suggested change, Applicant respectfully requests the withdrawal of this rejection for this reason also.

Accordingly, for at least these reasons, Applicant respectfully requests the withdrawal of this §103 rejection of independent Claim 12.

Claim 12 stands rejected under 35 U.S.C. §103 as being unpatentable over Atwell in view of Archibald. Applicant respectfully traverses this rejection.

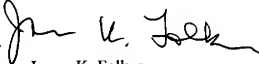
Applicant respectfully requests that the § 103 rejection of independent Claim 12 under Atwell in view of Archibald be withdrawn considering the above-remarks directed to independent Claim 12 when responding to the §103 rejection based on the combination of Martinoli, Atwell and Archibald.

For all of the above reasons, Applicant requests reconsideration and allowance of the claimed invention. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

If a Petition under 37 C.F.R. §1.136(a) for an extension of time for response is required to make the attached response timely, it is hereby petitioned under 37 C.F.R. §1.136(a) for an extension of time for response in the above-identified application for the period required to make the attached response timely. The Commissioner is hereby authorized to charge fees which may be required to this application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069.

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